

CLAIMS

1. A scheduling method for scheduling subcarriers in an uplink multicarrier signal which a base station apparatus allows a plurality of radio communication terminal apparatuses to use, the method comprising:
- 5 a measurement step of measuring, per subcarrier, reception quality of an uplink multicarrier signal or a downlink multicarrier signal each radio communication terminal apparatus transmits or receives;
- 10 a calculation step of calculating average reception quality of each radio communication terminal apparatus;
- a selection step of selecting the radio communication terminal apparatuses in ascending order of calculated average reception quality; and
- 15 an assignment step of assigning a subcarrier in the uplink multicarrier signal to the selected radio communication terminal apparatus in descending order of reception quality measured in the measurement step.
- 20 2. The scheduling method according to claim 1, further comprising a determination step of determining a modulation scheme having the highest transmission rate and applicable to the subcarriers in the uplink multicarrier signal for each radio communication terminal
- 25 apparatus based on the measurement result of reception quality in the measurement step,
- wherein, in the assignment step, the subcarrier in

the uplink multicarrier signal is assigned, in descending order of reception quality measured in the measurement step, to the radio communication terminal apparatuses selected in the selection step in accordance with
5 transmission rate corresponding to the modulation scheme determined in the determination step until predetermined transmission rate scheduled for the radio transmission terminal apparatus is satisfied.

10 3. A base station apparatus for performing radio communication with a plurality of radio communication terminal apparatuses, the base station apparatus comprising:

a reception section that receives an uplink
15 multicarrier signal transmitted by each of the plurality of radio communication terminal apparatuses;

a measuring section that measures reception quality of the received uplink multicarrier signal per subcarrier;

20 a scheduler that calculates average reception quality of the uplink multicarrier signal transmitted by each radio communication terminal apparatus, selects the radio communication terminal apparatuses in ascending order of average reception quality, and assigns a
25 subcarrier in the uplink multicarrier signal to the selected radio communication terminal apparatus in descending order of reception quality measured in the

measuring section; and

a transmission section that transmits a downlink multicarrier signal formed with the subcarriers assigned by the scheduler.

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4. The base station apparatus according to claim 3, wherein the scheduler comprises a determination section that determines a modulation scheme having the highest transmission rate and applicable to the subcarriers in the uplink multicarrier signal for each radio communication terminal apparatus based on the measurement result of reception quality of the uplink multicarrier signal per subcarrier by the measuring section, calculates average reception quality of the uplink multicarrier signal each radio communication terminal apparatus transmits, selects the radio communication terminal apparatus in ascending order of calculated reception quality, and assigns the subcarrier in the uplink multicarrier signal to the selected radio communication terminal apparatus in descending order of reception quality measured in the measuring section.

5. A base station apparatus for performing radio communication with a plurality of radio communication terminal apparatuses, the base station apparatus comprising:

a reception section that receives an uplink

multicarrier signal containing control information whose content includes reception quality of a downlink multicarrier signal per subcarrier measured by each of the plurality of radio communication terminal apparatuses;

a scheduler that calculates average reception quality of the downlink multicarrier signal transmitted by each radio communication terminal apparatus, selects the radio communication terminal apparatuses in ascending order of average reception quality, and assigns a subcarrier in the uplink multicarrier signal to the selected radio communication terminal apparatus in descending order of reception quality measured in the measuring section; and

a transmission section that transmits a downlink multicarrier signal formed with the subcarriers assigned by the scheduler.

6. The base station apparatus according to claim 5, wherein:

the scheduler comprises a determination section that determines a modulation scheme having the highest transmission rate and applicable to the subcarriers in the uplink multicarrier signal for each radio communication terminal apparatus based on the control information; and

the scheduler calculates average reception quality

of the downlink multicarrier signal each radio communication terminal apparatus receives, selects the radio communication terminal apparatus in ascending order of calculated reception quality, and assigns the
5 subcarrier in the uplink multicarrier signal to the selected radio communication terminal apparatus in descending order of reception quality measured in the measuring section in accordance with transmission rate corresponding to the modulation scheme determined in the
10 determination section until predetermined transmission rate scheduled for the radio transmission terminal apparatus is satisfied.